

The applicant disagrees with this rejection by the Examiner. The applicant is aware that obviousness judgments are not subject to bright line rules and that the prior art need not expressly state the motivation to combine references (*Alza Corp. v. Mylan Laboratories, Inc.*, 464 F.3d 1286) (Fed. Cir. 2006).

However, the applicant takes the position, that one skilled in the art of carbon black manufacture would not necessarily look to Graham for the motivation to add that technology to the carbon black process of Schora.

One mitigating factor against the combination is that the Schora process uses a combination of a carbon black furnace containing a heat exchanger within it (noted by the Examiner). The all-ceramic furnace taught by Graham does not lend itself to being incorporated in a carbon black furnace. The Graham heat exchanger is designed to facilitate the conveyance of gases and air. There is no provision for reacting materials to create carbon black, and no provisions for the removal of carbon black from the interior of the heat exchanger. There are two reasons for this. One, the process of Schora requires that the gases carrying the carbon black have direct access to the heat of the tubes of the Schora heat exchanger so that the carbon black will deposit within the furnace. Two, the heat exchanger of Graham has layers of insulation around the heat exchange capability and in addition, the Graham heat exchanger has a steel shell around the layers of insulation. Therefore, how could the Graham heat exchanger fit into the Schora process such that the gases carrying the carbon black can interact with the heated surfaces?

The conclusion has to be that the heat exchanger of Schora is not the heat exchanger of Graham, and they cannot be exchanged in the Schora process. Thus, it would not be obvious to combine the teachings of Graham with the teachings of Schora to come up with a novel carbon black manufacturing system as is found in the instant invention.

In addition, Graham clearly teaches in U.S. Patent 5,979,543 that his system is intended for low to medium pressure, high temperature use. See column 2, lines 52 to 65, especially lines 60 and 61 with regard to pressures.

Schora clearly teaches high pressure, high temperature use (see column 10, lines 19 to 21 and lines 49 to 55).

The applicant would then ask why it would be obvious to combine Graham with Schora when there is such a discrepancy between operating conditions. It appears to the applicant that Schora teaches away from the instant invention.

On the basis of the above, the applicant respectfully requests that the Examiner withdraw the rejections and allow the claims to issue.

Respectfully submitted,



Robert L. McKellar  
Reg. No. 26,002  
(989) 631-4551